WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:

a reading unit which reads image information on an original;

a first compression unit which compresses the image information read by the reading unit into compressed image information;

a first encoding unit which encodes the compressed image information;

an interface unit which acquires printing information in a page description language from exterior;

a generating unit which generates printing image information on the basis of the printing information;

a second compression unit which compresses the printing image information into compressed printing image information;

a second encoding unit which encodes the compressed printing image information;

a decoding unit which decodes the encoded compressed image information and the encoded compressed printing image information, and which outputs the compressed image information and the compressed printing image information;

an expansion unit which expands the compressed image information and the compressed printing image information decoded by the decoding unit; and

a forming unit which forms an image onto a
recording medium on the basis of the image information
and the printing image information expanded by the
expansion unit.

5   2.   An image forming apparatus according to
claim 1, wherein the first compression unit, the first
encoding unit, the decoding unit, and the expansion
unit are provided in one chip.

3.   An image forming apparatus according to
10   claim 1, wherein the conversion processing of the first
compression unit and the conversion processing of the
first encoding unit are synchronized, and due to the
synchronized one-time conversion processing, the image
information read by the reading unit is converted into
15   the encoded compressed image information.

4.   An image forming apparatus according to
claim 1, wherein the encoding conversion processing
and the expansion conversion processing of the first
decoding expansion unit are synchronized, and due to
20   the synchronized one-time conversion processing, the
compressed image information encoded by the first
encoding unit is converted into the image information.

5.   An image forming apparatus according to
claim 1, wherein the conversion processing of the
25   second compression unit and the conversion processing
of the second encoding unit are synchronized, and due
to the synchronized one-time conversion processing, the

printing image information generated by the generating unit is converted into the encoded compressed printing image information.

6. An image forming apparatus according to claim 1, further comprising:

a control unit which provides a non-compression/ non-encoding mode in which the first or second compression unit and the first or second encoding unit do not carry out any of compression processing and encoding processing, and when it is selected, controls so as to carry out image formation by supplying at least one of the image information on the original and the printing information in the page description language as is to the forming unit.

7. An image forming apparatus comprising:

a reading unit which reads image information on an original;

a first compression encoding unit provided in a first semiconductor chip, which compresses and encodes the image information read by the reading unit into compressed image information;

an interface unit which acquires printing information in a page description language from exterior;

a generating unit which generates printing image information on the basis of the printing information;

a second compression encoding unit provided in

a second semiconductor chip, which compresses and
encodes the printing image information into compressed
printing image information;

a decoding expansion unit provided in the first
5   semiconductor chip, which decodes and expands the
encoded compressed image information; and

a forming unit which forms an image onto a
recording medium on the basis of the image information
and the printing image information which have been
10   decoded and expanded by the decoding expansion unit.

8.   An image forming method comprising:

reading image information on an original;

compressing the read image information into
compressed image information;

15   encoding the compressed image information;

acquiring printing information in a page
description language from exterior;

generating printing image information on the basis
of the printing information;

20   compressing the printing image information into
compressed printing image information;

encoding the compressed printing image
information;

decoding and expanding the encoded compressed
25   image information and the encoded compressed printing
image information; and

forming an image onto a recording medium on the

basis of the image information and the printing image information which have been decoded and expanded.

9. An image forming method according to claim 8, wherein the compressing, the encoding, the decoding, and the expanding of the image information on the original are carried out in one chip.

10. An image forming method according to claim 8, wherein the conversion processing of the compressing and the conversion processing of the encoding of the image information on the original are synchronized, and due to the synchronized one-time conversion processing, the image information is converted into the encoded compressed image information.

11. An image forming method according to claim 8, wherein the encoding conversion processing and the expansion conversion processing of the encoding and expanding of the compressed image information are synchronized, and due to the synchronized one-time conversion processing, the compressed image information is converted into the image information.

12. An image forming method according to claim 8, wherein the conversion processing of the compressing and the conversion processing of the encoding of the printing image information in the page description language are synchronized, and due to the synchronized one-time conversion processing, the printing image information is converted into the encoded compressed

printing image information.

13. An image forming method according to claim 8, further comprising:

providing a non-compression/non-encoding mode in which any of the compression processing and the encoding processing are not carried out, and when it is selected, carrying out image formation onto the original on the basis of at least one of the image information on the original and the printing information in the page description language.